

AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made.

1. (Currently Amended) A system for communicating data, comprising:
a data switch coupled to one or more customer premises equipment (CPE) devices;
the data switch comprising software embodied in a computer readable medium operable to:

communicate with the one or more CPE devices using a first predetermined power spectral density (PSD); and

communicate with the one or more CPE devices using a second predetermined PSD; and

automatically select one of the first predetermined PSD and the second predetermined PSD that will establish a link to the one or more CPE devices when a user selects another one of the first predetermined PSD and the second predetermined PSD that will not establish a link to the one or more CPE devices.

2. (Previously Presented) The system of Claim 1, wherein the data switch is further operable to communicate substantially simultaneously with two or more CPE devices using at least two different PSDs.

3. (Previously Presented) The system of Claim 1, wherein the data switch is further operable to direct a CPE device to communicate with the data switch using a particular PSD.

4. (Previously Presented) The system of Claim 3, wherein the data switch directs the CPE device by communicating control packets containing one or more parameters defining one or more characteristics of the particular PSD to the CPE device.

5. (Previously Presented) The system of Claim 1, wherein the first predetermined PSD is substantially optimal for communication across a line coupling the data switch with a CPE device, the line experiencing substantially high levels of noise.

6. (Previously Presented) The system of Claim 1, wherein the first predetermined PSD is substantially optimal for communication across a line coupling the data switch with a CPE device, the line experiencing substantially low levels of noise.

7. (Previously Presented) The system of Claim 1, wherein the first predetermined PSD is substantially optimal for communication across a line coupling the data switch with a CPE device, the line experiencing substantially high signal attenuation.

8. (Original) The system of Claim 1, wherein the second predetermined PSD complies with at least one public standard.

9. (Previously Presented) The system of Claim 1, wherein the data switch is further operable to communicate with the one or more CPE devices using a high-probability PSD characterized by a substantially high probability of supporting communication and a substantially low bit rate, the high-probability PSD being substantially within the intersection of a plurality of PSDs complying with a plurality of public standards.

10. (Previously Presented) The system of Claim 9, wherein the data switch communicates with the one or more CPE devices using the high-probability PSD to establish a particular PSD for communication between the switch and the one or more CPE devices.

11. (Previously Presented) The system of Claim 1, wherein the data switch is further operable to communicate with the one or more CPE devices using a PSD defined by a network administrator.

12. (Previously Presented) The system of Claim 1, wherein:
the data switch comprises memory operable to store one or more parameters defining particular characteristics of one or more PSDs; and
the data switch is further operable to communicate with the one or more CPE devices using a PSD selected by a network administrator from a list of the one or more PSDs the parameters of which are stored in the memory.

13. (Previously Presented) The system of Claim 1, wherein the data switch uses frequencies in the very high speed digital subscriber line (VDSL) band.

14. (Previously Presented) The system of Claim 1, wherein the data switch is further operable to automatically communicate with all of the CPE devices coupled to the data switch using a predetermined PSD that complies with at least one public standard in response to a switch administrator setting the switch for operation in a regulated spectra environment.

15-21. (Cancelled)

22. (Currently Amended) A system for communicating data, comprising:
a switch using frequencies in a very high-speed digital subscriber line (VDSL) band coupled to one or more customer premises equipment (CPE) devices;

the switch operable to:

communicate with the one or more CPE devices using a first power spectral density (PSD) complying with at least one public standard;

communicate with the one or more CPE devices using a plurality of second PSDs that do not comply with a public standard, the second PSDs being substantially optimal for communications across lines coupling the switch with the one or more CPE devices;

communicate substantially simultaneously with two or more CPE devices using at least two different second PSDs; and

automatically communicate with all of the CPE devices coupled to the switch using a predetermined PSD that complies with at least one public standard in response to a switch administrator setting the switch for operation in a regulated spectra environment;

the operability of the switch being provided by software embodied in a computer-readable medium.

23. (New) The system of Claim 22, wherein the switch is further operable to direct a CPE device to communicate with the switch using a particular PSD.

24. (New) The system of Claim 23, wherein the switch directs the CPE device by communicating control packets containing one or more parameters defining one or more characteristics of the particular PSD to the CPE device.

25. (New) A system for communicating data, comprising:
a data switch coupled to one or more customer premises equipment (CPE) devices;
the data switch comprising software embodied in a computer readable medium and a physical media controller (PMC) operable to:

communicate with the one or more CPE devices using a first predetermined power spectral density (PSD) that conforms to a public standard;

communicate with the one or more CPE devices using a second predetermined PSD that does not conform to a public standard; and

automatically select one of the first predetermined PSD and the second predetermined PSD that will establish a link to the one or more CPE devices when a user selects another one of the first predetermined PSD and the second predetermined PSD that will not establish a link to the one or more CPE devices;

the PMC further comprising one or more memory registers operable to select the PSD.

26. (New) The system of Claim 25, wherein the data switch is further operable to communicate substantially simultaneously with two or more CPE devices using at least two different PSDs.

27. (New) The system of Claim 25, wherein the data switch is further operable to direct a CPE device to communicate with the data switch using a particular PSD.

28. (New) The system of Claim 26, wherein the data switch directs the CPE device by communicating control packets containing one or more parameters defining one or more characteristics of the particular PSD to the CPE device.

29. (New) The system of Claim 25, wherein the first predetermined PSD is substantially optimal for communication across a line coupling the data switch with a CPE device, the line experiencing substantially high levels of noise.

30. (New) The system of Claim 25, wherein the first predetermined PSD is substantially optimal for communication across a line coupling the data switch with a CPE device, the line experiencing substantially low levels of noise.